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# BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/529,778 Filing Date: March 30, 2005

Appellant(s): EPSTEIN, MICHAEL A.

Robert M. McDermott Registration No. 41,508 <u>For Appellant</u>

**EXAMINER'S ANSWER** 

This is in response to the appeal brief filed 06/28/2010 appealing from the Office action mailed 02/17/2010.

#### (1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

### (2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

#### (3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-21 are rejected and pending in the application.

#### (4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

#### (5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

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## (6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

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#### (7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

#### (8) Evidence Relied Upon

Co-pending application	Rosner et al.	02-2006
10/529,353		
6717915	Liao et al.	04-2004
20030184431	Lundkvist	10-2003
6363477	Fletcher et al.	05-2002
6088450	Davis (not used for rejection.	07-2000
	typo)	

#### (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

#### **Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 1, 2, 3, 4, 6, 7, 9, 10, 11, 12 are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 4, 5, 8, 9, 11, 12, 13, 14 of copending Application No. 10529353 in view of Liao et al. USPN 6717915 B1.

Although the conflicting claims are not identical they are not patentable distinct from each other because the instant application determines the proximity of one node to another by measuring the query-response time and the processing time. The copending application determines the proximity of one node to another by measuring a communication time. It would be obvious to one of ordinary skill in the art at the time of the applicant's invention that the processing time and the query-response time is another way to express a communication time.

The copending application fails to disclose including processing time in the response.

However Liao et al. discloses including processing time in a response (see col. 1 lines 61-col. 2 lines 62 and figs. 1-4).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Liao et al. within the system of the copending application to calculate performance proximity and enhance the network.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030184431 (Lundkvist) in view of US 6363477 (Fletcher) and in view of US 6088450 (Davis).

**As to claim 1,** (Original) Lundkvist discloses a method of determining proximity of a target node to a source node, comprising:

communicating a query from the source node to the target node (Lundkvist page 3, paragraph 31),

communicating a response from the target node to the source node (Lundkvist page 3, paragraph 32),

receiving the response at the source node (Lundkvist page 3, paragraph 32),

determining a measure of query-response time between communicating the query and receiving the response (Lundkvist page 3, paragraph 32). Lundkvist does not explicitly teach the response from the target node including a measure of processing time required to generate the response based on the query, and determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time.

However, Fletcher discloses the response from the target node including a measure of processing time/time-stamps required to generate the response based on the query (Fletcher column 18, lines 28-63 and claim 8), and determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response

time and the measure of processing time (Fletcher column 18, lines 28-63, figs. 8-11 and claim 9).

It would be obvious to one of ordinary skill in the art at the time of the applicant's invention to combine Lundkvist and Fletcher because Lundkvist does not specifically calculate the query-response time without subtracting the processing time to get the true network latency time but, Fletcher calculates this performance metric exactly to determine the proximity of one node to another node (Fletcher column 18, lines 57-62).

**As to claim 2,** (Original) Lundkvist discloses the method of claim 1, wherein the query and response correspond to at least a portion of a cryptographic key-exchange protocol (Lundkvist page 3, paragraphs 29, 31, and 32).

**As to claim 3,** (Original) Lundkvist discloses the method of claim 2, wherein the key-exchange protocol corresponds to a Needham-Schroeder key-exchange protocol (Lundkvist page 3, paragraph 29: a symmetric key encryption which is a type of Needham-Schroeder protocol).

As to claim 4, (Original) Lundkvist discloses the method of claim 1, wherein the query and response correspond to at least a portion of an OCPS protocol (Lundkvist page 3, paragraphs 29-34: teaches an authentication stage, a key exchange stage, a key generation stage, and a data transmission stage of the OCPS protocol).

**As to claim 5,** (Original) Lundkvist discloses the method of claim 1, wherein the measure of processing time at the target node is predefined (Lundkvist page 4, paragraph 0041).

As to claim 6, (Original) Lundkvist discloses the method of claim 1, wherein determining the proximity includes comparing the communication time to a threshold value that

distinguishes between local and remote nodes (Lundkvist page 4, paragraph 0042 and paragraph 0049).

**As to claim 7,** (Original) Lundkvist discloses the method of claim 1, further including restricting communications with the target node based on the proximity (Lundkvist page 2, paragraph 0018).

**As to claim 8,** (Original) Lundkvist discloses the method of claim 1, wherein the response is cryptographically signed by the target node (Lundkvist page 3, paragraph 0034).

**As to claims 9-21,** claims 9-21 encompass the same scope of the invention as those of claims 1-8 with the additions of a target "a communication device", a target "a processor", a source "a communication device", and a source "a processor" (Lundkvist page 4, paragraph 0051).

#### (10) Response to Argument

The examiner's response to arguments with respect to Provisionally rejected claims on the grounds of nonstatutory obviousness-type double patenting.

Regarding argument the examiner failure to identify and/or Liao failure to disclose "a processing time for responding to a particular query or wherein Liao discloses the inclusion of this (non-existent) processing time for responding to the query in the response to this query," argument is not persuasive because Liao teaches measuring, at the client device, the client timing statistics and transmitting the measured client timing statistics from the client device to the server

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device (see col. 2 lines 35-37). Liao clearly discloses the argued subject matter as identified by the examiner, in the final office action mailed on 02/17/2010 page 11, (see col. 1 lines 61-col. 2 lines 62 and figs. 1-4 of Liao), the client timer 262 measuring the client Timing Parameter 304 that includes client processing time "ClntProcTime and sending ClntProcTime 328 to the server, in response to Report Processing time request 325 received (see fig. 2 elements 262 and 270, fig. 3 elements 325 and 328).

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# Figure 3

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#### Server

SRoundTripTime = 2.85 seconds SrvProcTime = 2.72 seconds

SMIRI: 1.7 seconds

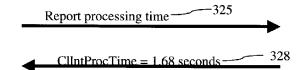
SBOCP for server: 1.01 1.32 2.15 4.82 8.20

#### Client

CRoundTripTime = 4.21 seconds ClntProcTime = 1.68 seconds

CMIRI: 2.1 seconds

CBOCP: 1.01 1.28 2.14 4.65 7.62



SRoundTripTime=3.11

Calculate new SMIRI SMIRI = 1.68+0.5 = 2.18

Set Daytime SBOCP

SBOCP = 1.22, 1.56, 2.44, 5.6, 10.4

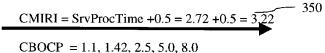
Calculate new SRTV

SRTV[i] = Max(SMIRI, SRoundTripTime) \* SBOCP[i]

SRTV[i] = Max(2.18, 3.11) \* SBOCP[i]

SRTV[]=3.79, 4.85, 7.59, 17.42, 32.34 seconds

Calculate and send new CMIRI



Calculate new CRTV

CRTV[i] = Max(CMIRI, CRoundTripTime) \* CBOCP[i]

CRTV[i] = Max(3.22, 4.21) \*CBOCP[i]

CRTV[]=4.63, 5.98, 10.53, 21.05, 33.68 seconds

Regarding argument "Liao teaches the communication of 'timing statistics' from a client to server, and the communication of 'timing parameters' from a server to a client. ..., it is unclear whether the Examiner considers the 'timing statistics' from the client or the 'timing parameters' from the server as corresponding to the claimed measure of time to generate the claimed response to the claimed query," argument is not persuasive because Liao's client timing statistics and client timing parameters include ClntProcTime that is received, as a message 328, at the server in response to the Report processing time message sent from the server is used for calculation and performance evaluation (see fig. 3 above).

Regarding argument "Liao's 'timing statistics' from the client to the server cannot reasonably be considered to correspond to the claimed time required to generate the response based on the query. The generation of Liao's timing statistics will consume some time, but Liao does not teach or suggest that this report generation time should be included in the purpose of Liao's invention," argument is not persuasive because Liao clearly discloses the timer 262 of the mobile client system 260 measuring the processing time (ClntProcTime) the client takes to respond to any server message after the client system receives the server message (see col. 5 lines 62-64 and fig. 3). Liao further teaches the client responding to the request message by sending the client processing time in message 328 (see col. 7 lines 8-11 and fig. 3).

Regarding argument "Nowhere in Liao's specification, and in particular, nowhere in the text cited by the Examiner, does Liao address the time required to generate the timing statistics

and thus Liao cannot be said to include this (non-addressed) time to generate the timing statistics in the response to the query from the client," argument is not persuasive because Liao is combined for limitation 'including processing time in a response' see the last final office action page 11 and Liao does teach measuring the processing time, (ClntProcTime), the client takes to respond to any server message after the client system receives the server message and the client responding to the request message by sending the client processing time in message 328 (see col. 5 lines 62-64, col. 7 lines 8-11 and fig. 3). Liao's measured ClntProcTime received at the server is used for calculation and evaluation of timing performance (see col. 6, lines 14-26).

Based on the reasons above the obviousness double patenting rejection should be sustained.

The examiner's response to arguments with respect to 103(a) rejection over

Lundkvist in view of Fletcher: (The Examiner does not rely on Davis in the rejection. It is a typo).

Regarding argument Lundkvist, and Fletcher failure to teach "a response that includes a measure of the processing time required to generate the response based on the query for this response," Fletcher's response data packet 395 (of figs. 3 & 8) includes 'time-stamps' that provide an accurate measure of when the data packets are transmitted and received (see col. 18 lines 12-17) and determine file transfer rate (see col. 16 lines

50-54), the time-stamped response data packet 395 is based on the request data packet 390 received (see col. 23 lines 66-col. 24 lines 5 and figs. 3 & 8).

Regarding argument "...These steps apply the recognition characteristics to each data packet, then time stamp the packet when it is sent from one computer and when it is received at the other. Of particular note, no computations of timing differences are performed during these processes," remark page 9, argument is not persuasive because the time-stamps of Fletcher provide an accurate measure of when the data packets are transmitted and received (see col. 18 lines 12-17) and determine file transfer rate (see col. 16 lines 50-54), as claimed; and the computations of timing differences are not claimed at that limitation. 'including a measure of processing time required to generate the response based on the query' is claimed and that is different from 'performing computations of timing differences during these process'. The argued part of the limitation recites including an amount of a measured time required to generate the response in the response but does not recite how the time is computed and Fletcher teaches including a measured time-stamps, to calculate the file transfer rate/accurate measure of the packets, in the response data packet (see col. 16 lines 50-54 and col. 18 lines 12-17 and figs. 3 & 8).

Regarding argument 'the processing time is unknown in Fletcher's disclosure and the Examiner's assertion to time-stamp is incorrect since the response provides no indication of processing time and/or 'Time stamp T2' is not in the response, ... thus, Fletcher's response cannot reasonably be said to include indication of the processing

time', argument is not persuasive because the time-stamps are processing time measurement since they provide an accurate measure of when the data packets are transmitted and received (see col. 18 lines 12-17) and the 'time-stamps' applied to response data packet 395 are utilized to determine the file transfer rate from the server to client computer system (see col. 16 lines 50-55). The time-stamps T2 and T3 are stamped and included on the response message 395 (see col. 18 lines 12-17 and figs. 3 and 8) and according to (col. 12 lines 47-col. 13 lines 4) of Fletcher, 'application processing time' is the time required for server to complete performing a network application in response to requests received from client. In one embodiment of the present invention, application processing time is the elapsed time period between the time when request data packet 390 enters application layer of server and the time when the corresponding response data packet 395 exits application layer of the sever (from D to E). In another embodiment, application processing time is the period from the time when the application program interface of server issues a receive socket call corresponding to request data packet 390 to the time when the application program interfaces of server computer system issues a send socket call corresponding to response data packet 395.

Regarding argument '... Fletcher specifically teaches that the measure of processing time is determined and/or estimated <u>after</u> the response is sent from the target/server and subsequently received at the source/client,' argument is not persuasive because the time-stamp(s) are determined and stamped on the response data packet 395 before the response is sent (see col. 24 lines 1-6, col. 16 lines 50-55 and fig. 8).

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Regarding argument 'If Fletcher's response included a measure of the processing

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time, there would be no need for Fletcher to determine a correlated request, obtain the

time stamp T2 from this correlated request, and subtract it from the time stamp T3 of the

response,' argument is not persuasive because protocol latency is calculated using the

measured time-stamps in the response packet, to provide an accurate measure of network

performance and reliability (see col. 16, lines 29-35).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Eleni A Shiferaw/

Primary Examiner, Art Unit 2436

Conferees:

/Carl Colin/

Primary Examiner, Art Unit 2433

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/Nasser Moazzami/

Supervisory Patent Examiner, Art Unit 2436